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PATENT SPECIFICATION

NO DRAWINGS

987,800



Date of Application and filing Complete Specification: Jan. 18, 1963.

No. 2308/63.

Application made in Japan (No. 4842) on Feb. 13, 1962.

Complete Specification Published: March 31, 1965.

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Index at acceptance:—A5 B (31, 34)

Int. Cl.:—A 61 k

COMPLETE SPECIFICATION

Improvements in or relating to Toilet Preparations containing Amino Acids

We, SHISEIDO COMPANY LIMITED, of No. 3—5, 7-chome, Ginza-nishi, Chuo-ku, Tokyo, Japan, a Joint-Stock Company organised under the laws of Japan, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The present invention is concerned with improvements in or relating to toilet preparations.

The toilet preparations according to the present invention are characterised by containing, apart from the ingredients required for such intended use of the said preparations, one or more amino acids and one or more stabilisers, therefor, said stabilisers being esters of amino

acids and/or salts of said esters, in non-aqueous ethanolic solution or in aqueous ethanolic solution containing not more than 10% by weight of water.

Amino acids which may be used according to the present invention include, for example, glycine, alanine, valine, leucine, isoleucine, threonine, aspartic acid, glutamic acid, arginine, lysine, oxylysine, cystine, cysteine, methionine, histidine, proline, oxyproline, phenyl-alanine, tyrosine and tryptophane.

While amino acids are, in general, more or less soluble in water, they are insoluble in absolute ethanol and insoluble or only very slightly soluble in aqueous ethanol containing less than about 10% by weight of water, as can be seen from the following Table:

TABLE

	Solubility at 25° C.
glycine in 95% ethanol	0.017%
L-aspartic acid in 90% ethanol	0.003%
LD-alanine in 95% ethanol	0.03%

However, some toilet preparations, such as hair tonics or lotions, are mostly ethanolic solutions, so that the ingredients of such preparations must exist stably in a dissolved state in ethanolic solution.

In the toilet preparations according to the present invention, one or more amino acids are dissolved and kept in a stable state in such ethanolic solutions and are not precipitated or oxidised, by using certain stabilising agents, these stabilising agents being alkyl esters of α -amino acids, alkyl esters of dicarboxylic

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amino acids and alkyl esters of sulphur-containing amino acids, as well as the hydrochlorides of these esters.

The stabilising esters and the hydrochlorides thereof include the methyl and ethyl esters of α -amino acids, of dicarboxylic amino acids and of sulphur-containing amino acids, for example, the dimethyl ester of cystine, the ethyl ester of glycine and the diethyl ester of glutamic acid, and the hydrochlorides of these esters.

These esters of amino acids not only have

102 b Cl. 1, 24, 5 2 10

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an excellent stabilising property, which keeps the amino acids in stably dissolved or dispersed state in the toilet preparations, but they also themselves act as active ingredients of the toilet preparations since they may be used by living organisms either directly or after enzymic hydrolysis into the corresponding free amino acids.

In practice, it is convenient to use stock solutions of the amino acids and stabilisers for the production of the various types of toilet preparations according to the present invention.

The stock solutions for use in the production of toilet preparations according to the present invention consist of one or more amino acids and one or more of the above-defined esters of amino acids and hydrochlorides thereof, dissolved stably in ethanol with a concentration of more than 90%, the concentrations of some of the amino acids thereby being much higher than those which are obtained in ethanol without the use of the stabilisers.

If desired, 1—2% by weight of sorbitol can also be added to the stock solution as an auxiliary stabiliser.

The toilet preparations according to the present invention can be readily prepared by adding an appropriate amount of stock solution to an ethanolic solution containing the other ingredients required for the production of the toilet preparations in question.

The toilet preparations according to the present invention can, of course, also be produced by dissolving the desired amino acids and all the other desired ingredients in an ethanolic solution of the above-defined stabilisers.

Thus, the object of the present invention is to provide stable ethanolic preparations which are produced by adding to various types of toilet preparations one or more amino acids as active ingredients in any desired amount.

The following Examples are given for the purpose of illustrating the present invention, all percentages being by weight, unless otherwise stated:—

EXAMPLE 1 Cream

To a mixture of 10 g. bees' wax, 5 g. solid paraffin, 6 g. whale wax, 50 g. liquid paraffin and a suitable amount of "rose type" scent, there was added 1 g. of a 95% ethanolic stock solution containing the following amino acids and esters of amino acids:—

Dimethyl ester of cystine	25%
Ethyl ester of glycine	9.1%
Diethyl ester of glutamic acid	18.3%
L-serine	0.043%
60 Benzyl-taurine	0.166%
L-histidine	0.083%
L-tyrosine	0.001%
L-aspartic acid	0.425%

L-lysine ✓	0.042%	
L-cystine	0.008%	65
L-glutamic acid	0.017%	
Glycine	0.017%	
L-arginine	0.067%	
L-glutamine	$2 \times 10^{-5}\%$	
Taurine	$3 \times 10^{-5}\%$	70

The mixture was melted.

0.7 g. of borax were then dissolved in 27.3 g. water and this solution and the above mixture were mixed together and heated to about 70°C. for 30 minutes, while emulsifying thoroughly, to give a water-in-oil type of emulsified cream. This cream was stable and no crystals or precipitates of amino acids were found to separate from it on standing for a period of six months at a temperature of from -10 to 37°C.

EXAMPLE 2 Cream

1 g. of the ethanolic stock solution described in Example 1 was added to a mixture of 17 g. of stearic acid, 1 g. of dehydrated lanolin and a suitable quantity of "rose type" scent and the resulting mixture was melted.

In a separate vessel, there was prepared a mixture of 65.5 g. of water, 10 g. of glycerol, 4 g. of borax and 2 g. of triethanolamine. The two mixtures were then mixed together and heated to about 65°C. and emulsified to give an oil-in-water type of emulsified cream. This cream was stable and no crystals or precipitates of amino acids were found to separate from it on standing for six months at a temperature of from -10 to 37°C.

EXAMPLE 3 Emulsion

2 g. of stearic acid, 1 g. of cetyl alcohol, 5 g. of petroleum jelly, 10 g. of liquid paraffin, 3 g. of polyoxyethylene monooleate suitable for the production of oil-in-water type of emulsions and 1 g. of the ethanolic stock solution described in Example 1 were mixed and melted. A mixture of 77 g. of distilled water and 1 g. of triethanolamine was prepared separately. An emulsion was then prepared by heating together the two mixtures at about 65°C. and emulsifying them.

This emulsion was stable and no crystals or precipitates of amino acids were found to separate from it on standing for six months at a temperature of from -10 to 37°C.

EXAMPLE 4 Hair cream

5 g. of bees' wax, 4 g. of lanolin, 4 g. of petroleum jelly, 31 g. of liquid paraffin and 8 g. of emulsifier (4 g. of sorbitan monostearate and 4 g. of sorbitan monostearate which has been polyoxyethylated) were mixed together and melted.

0.3 g. of borax, 2 g. of propylene glycol, 1 g.

of the ethanolic stock solution described in Example 1 and 30 g. of distilled water were separately mixed and heated to 65°C. for 30 minutes. The two mixtures were mixed together and a suitable quantity of "lavender type" scent was added. A hair cream was then produced by heating the mixture so obtained to 65°C. and emulsifying it.

This hair cream was stable and no crystals or precipitates of amino acids were found to separate from it on standing for six months at a temperature of from 10 to 37°C.

EXAMPLE 5 Hair tonic

To a mixture of 90 g. of ethanol, 5 g. of castor oil and 3 g. of tincture of capsicum were added 2 g. of the ethanolic stock solution described in Example 1. The mixture obtained was blended and melted. After the addition of a suitable quantity of "chypre type" scent, the mixture was filtered and a hair tonic was prepared.

This hair tonic was stable and no crystals or precipitates of amino acids were found to separate from it on standing for six months at a temperature of from -20 to 37°C.

EXAMPLE 6 Skin lotion

To 15 g. of ethanol and 3 g. of the ethanolic stock solution described in Example 1, there was added 0.1—0.5% of sodium methylacetopyranone (an antiseptic) and a suitable quantity of "rose type" scent. A mixture of 80 g. of water and 2 g. of glycerol was prepared separately. These two mixtures were mixed together, stirred and filtered to give a skin lotion. This skin lotion was stable and no crystals or precipitates of amino acids were found to separate from it on standing for six

months at a temperature of from -10 to 37°C.

EXAMPLE 7 Pomade

11 g. of "Japanese wax", 85 g. of castor oil, 2 g. of the ethanolic stock solution described in Example 1, 2 g. of "Fougere type" scent and 0.0001 g. of quinoline yellow SS (a pigment) and of 2,6 - di - tert. - butyl - hydroxytoluene (an anti-oxidant) were mixed, heated to melting point and quickly cooled to give a pomade.

This pomade was stable and no separation of amino acids was observed on standing for six months at a temperature of from 0 to 37°C.

WHAT WE CLAIM IS:—

1. Toilet preparations, characterised by containing one or more amino acids and one or more esters of amino acids and/or hydrochlorides of the said esters (as hereinbefore defined) in ethanolic solution containing not more than 10% by weight of water.

2. Toilet preparations according to claim 1, wherein the amino acids used are any of those hereinbefore specifically mentioned.

3. Toilet preparations according to claim 1 or 2, wherein the esters of amino acids and the hydrochlorides thereof are any of those hereinbefore specifically mentioned.

4. Toilet preparations according to any of the preceding claims, which additionally contain 1—2% by weight of sorbitol.

5. Toilet preparations according to claim 1, substantially as hereinbefore described and exemplified.

H. A. L. VENNER,
Chartered Patent Agent,
1, Great James Street, Bedford Row,
London, W.C.1.
Agent for the Applicants.

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